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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/641,355	08/14/2003	Stephen N. Vaughn	2000B028-2	1181

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EXAMINER	
DANG, THUAN D	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/641,355	VAUGHN ET AL.
	Examiner	Art Unit
	Thuan D. Dang	1764

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *19 and 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/14/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of group I invention (claims 1-18, 20) in the reply filed on 5/28/04 is acknowledged. The traversal is on the ground(s) that group I and II are so closed that they should remain in the same application. This is not found persuasive because applicants cannot demonstrate that the claimed product cannot be made by other processes.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 6, 9, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Daviduk et al (4,238,631).

Daviduk discloses a process comprising contacting oxygenates with a molecular sieve catalyst to produce olefins. The catalyst is then stripped with steam without regeneration (the abstract; the figure; col. 2, lines 5-16; col. 3, lines 33-35; col. 9, lines 55-65).

The condition of the reaction can be found on column 9, lines 44-48.

Claims 1, 2, 5, 6, 9, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Owen et al (4,071,573).

Owen discloses a process of converting a feed of alcohol, such as methanol to olefin (col. 10, lines 12-18). Owen discloses a step wherein a portion of the catalyst is stripped and recycled to the reaction zone without regeneration (col. 11, lines 60-65). On column 11, lines 63-68, Owen disclose a portion of the stripped catalyst is regenerated. On column 6, lines 45-50, the temperature of the process is disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 7, 8, 10, 11, 12, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daviduk et al (4,238,631).

Daviduk discloses a process as discussed above.

Daviduk does not disclose the ratio of the exposing time and the stripping time of the catalyst, the stripping gas flow rate and the percentage of hydrocarbon removed from the catalyst during the stripping step, and polymerization of the olefin product.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Daviduk by selecting appropriate amount of removed hydrocarbons on the catalyst, appropriate flow rates of the stripping gas, and appropriate amounts of time for exposing and stripping of the catalyst these parameters depend on the activity of the catalyst and how much the catalyst is covered by impurities. Further, in the absence of unexpected results, selecting these parameters for the Daviduk is obvious.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Daviduk process by polymerizing olefins to produce more valuable product, namely polymer.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daviduk et al (4,238,631) in view of Kuechler et al (6,245,703).

Daviduk discloses a process as discussed above.

Daviduk does not disclose using a catalyst as called for in claims 14-16 (see the entire patent for details). However, such a catalyst discussed by Kuechler is used for converting oxygenated to olefins (col. 3, lines 11-18; col. 4, lines 11-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Daviduk process by using the Kuechler catalyst to arrive at the applicants' claimed process since Kuechler discloses ZSM-5 and SAPO are suitable for converting oxygenates to olefins.

Claims 3, 4, 7, 8, 10, 11, 12, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al (4,071,573).

Owen discloses a process as discussed in the above 102 rejection.

Owen does not disclose the ratio of the exposing time and the stripping time of the catalyst, the stripping gas flow rate and the percentage of hydrocarbon removed from the catalyst during the stripping step, and polymerization of the olefin product.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Owen process by selecting appropriate amount of removed hydrocarbon on the catalyst, appropriate flow rates of the stripping gas, and appropriate amounts of time for exposing and stripping of the catalyst these parameters depend on the activity of the catalyst and how much the catalyst is covered by impurities. Further, in the absence of unexpected results, selecting these parameters for the Owen is obvious.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owen et al (4,071,573) in view of Kuechler et al (6,245,703).

Owen discloses a process as disclosed above.

Owen does not disclose using a catalyst as called for in claims 14-16 (see the entire patent for details). However, such a catalyst discussed by Kuechler is used for converting oxygenated to olefins (col. 3, lines 11-18; col. 4, lines 11-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Owen process by using the Kuechler catalyst to arrive at the applicants' claimed process since Kuechler discloses ZSM-5 and SAPO are suitable for converting oxygenates to olefins.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-18 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6,613,950. Although the conflicting claims are not identical, they are not patentably

distinct from each other because the conflicting claims discloses a process substantially the same except minor differences due to the dependency of the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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August 6, 2004